

Nvidia Astra Linux x86-64

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- [Astra Linux Special Edition .10015-01, .10015-10 \(1.7\) Astra Linux Special Edition .10015-37 \(7.7\)](#)
 - [22.11.2023](#)
 - [02.11.2023](#)
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NVIDIA

NVidia. "-" , . "-" .

, , Astra Linux Special Edition, :

- [Astra Linux Special Edition .10015-01 \(1.6\) :](#)
 - [DKMS;](#)
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 - [DKMS.](#)



NVidia [Astra Linux Special Edition .10015-01 \(1.7\), DKMS, Astra Linux Special Edition .10015-01 \(1.7\).](#)

NVidia [Astra Linux Special Edition .10015-01 \(1.6\), DKMS, Astra Linux Common Edition.](#)

DKMS "-" .



DKMS :

```
sudo apt install --reinstall <_>
```

Astra Linux Special Edition .10015-01, .10015-10 (1.7) Astra Linux Special Edition .10015-37 (7.7)

22.11.2023

[2021-1126SE17 \(1.7.1\).](#) .

:

- 340.108;
- 390.143;
- 460.84;
- 470.57;
- 495.44.

:

- 5.4.0:
 - linux-image-5.4.0-81-generic/linux-image-5.4.0-81-hardened;

02.11.2023

22.11.2023.

07.06.2023

[2023-0426SE17 \(1.7.4\)](#). .

:

- 340.108;
- 390.151;
- 470.129;
- 510.73.05;
- 525.78.01.

:

- 5.4.0:
 - linux-image-5.4.0-110-generic/linux-image-5.4.0-110-hardened;
- 5.10:
 - linux-image-5.10.176-1-generic/linux-image-5.10.176-1-hardened;
- 5.15.0:
 - linux-image-5.15.0-70-generic/linux-image-5.15.0-70-hardened/linux-image-5.15.0-70-lowlatency.

27.02.2023

[2022-1110SE17 \(1.7.3\)](#). .

:

- 340.108;
- 390.151;
- 460.91.03;
- 470.129.06
- 510.73.05;

:

- 5.4.0:
 - 5.4.0-110-generic / 5.4.0-110-hardened
- 5.10.0:
 - 5.10.142-1-generic / 5.10.142-1-hardened

Astra Linux Special Edition .10015-01 (1.6) Astra Linux Common Edition

DKMS, DKMS. .

04.07.2023. [20221220SE16 \(12\)](#) . :

- 535.54.03
- 525.78.01
- 510.73.05
- 470.129.06
- 390.151

: 06.09.2022. :

- 340.108 (2.12.45 5.15.0-33, 1.6);
- 390.143 (2.12.45 5.15.0-33, 1.6);
- 460.84;
- 470.57;
- ~~495.44 (03.12.21, 06.12.21, 06.09.22);~~

- 510.73 (23.05.2022);
- 515.65.01 (06.09.22).

:

- 4.15.3:
 - 4.15.3-1-generic / 4.15.3-1-hardened (Astra Linux Special Edition 1.6);
 - 4.15.3-2-generic / 4.15.3-2-hardened (Astra Linux Special Edition 1.6 [20200327SE16 \(5\)](#));
 - 4.15.3-141-generic / 4.15.3-141-hardened (Astra Linux Special Edition 1.6 [20210611SE16 \(7\)](#));
 - 4.15.3-154-generic / 4.15.3-154-hardened (Astra Linux Special Edition 1.6 [20211008SE16 \(9\)](#));
 - 4.15.3-177-generic / 4.15.3-177-hardened (Astra Linux Special Edition 1.6 [20220829SE16 \(11\)](#));
- 5.4.0:
 - 5.4.0-71-generic / 5.4.0-71-hardened (Astra Linux Special Edition 1.6 [20210611SE16 \(7\)](#));
 - 5.4.0-81-generic / 5.4.0-81-hardened (Astra Linux Special Edition 1.6 [20211008SE16 \(9\)](#));
- 5.10.0:
 - 5.10.0-1038.40-generic / 5.10.0-1038.40-hardened (Astra Linux Common Edition 2.12.43);
 - 5.10.0-1045-generic / 5.10.0-1045-hardened (Astra Linux Special Edition 1.6 [20211008SE16 \(9\)](#));
 - 5.10.0-1057-generic / 5.10.0-1057-hardened (06.09.22) (Astra Linux Special Edition 1.6 [20220829SE16 \(11\)](#));
- 5.15.0:
 - 5.15.0-33-generic / 5.15.0-33-hardened (340 390 2.12.45) (Astra Linux Special Edition 1.6 [20220829SE16 \(11\)](#)).



NVidia Astra Linux x86-64. , .

NVidia



Astra Linux Special Edition .10015-01 (1.7) [2022-0819SE17 \(1.7.2\)](#) fly-admin-driver ("" - "" - "" - "").

1. /etc/X11/xorg.conf, (), :

```
sudo mv /etc/X11/xorg.conf /etc/X11/xorg.conf.`date +%s`
```

2. Nouveau, /etc/modprobe.d/blacklist.conf



blacklist nouveau
options nouveau modeset=0

/etc/initramfs-tools/modules nouveau modeset=1



#nouveau modeset=1

```
update-initramfs -u -k all
```

:

```
echo blacklist nouveau >> /etc/modprobe.d/blacklist.conf
echo options nouveau modeset=0 >> /etc/modprobe.d/blacklist.conf
sed -i -e "s/^[[:space:]]*nouveau[[:space:]]*\+modeset[[:space:]]*=[[:space:]]*1/#nouveau modeset=1/" /etc/initramfs-tools/modules
update-initramfs -u -k all
```

NVidia

1. . web-:
 - a. Astra Linux Special Edition .10015-01 (1.7):

- i. NVidia c DKMS
- ii. NVidia DKMS :
 1. 2023-0426SE17 (1.7.4): <https://nextcloud.astralinux.ru/s/BRk25PEmoj6XqCQ>.
 2. 2022-1110SE17 (1.7.3): <https://nextcloud.astralinux.ru/s/m5n4pewBAY5M2tM>.
 3. 2021-1126SE17 (1.7.1): <https://nextcloud.astralinux.ru/s/xqqT3DgZjMJg8Wx>.
- b. Astra Linux Special Edition .10015-01 (1.6) 20221220SE16 (12) : <https://nextcloud.astralinux.ru/s/nbmPKskMkQG7Xrc>.
- c. Astra Linux Special Edition .10015-01 (1.6), Astra Linux Special Edition .10015-16 . 1 Astra Linux Common Edition : <https://nextcloud.astralinux.ru/s/PCqFtS5MeY5MDM4>.

2. . , /srv:

```
sudo tar xf ALSE1?-NVidia-all-*.tar.gz -C /srv
```

3. (. Astra Linux). , :

a. Astra Linux Special Edition .10015-01 (1.7):

```
deb file:/srv/ALSE17-NVidia-all-230607 1.7_x86-64 non-free
```

```
deb file:/srv/ALSE17-NVidia-all-230227 1.7_x86-64 non-free
```

b. Astra Linux Special Edition .10015-01 (1.6), Astra Linux Special Edition .10015-16 . 1 Astra Linux Common Edition:

```
deb file:/srv/ALSE16-NVidia-all-220906 smolensk non-free
```



" " , :

```
deb file:///srv/ALSE17-NVidia-all-230227 1.7_x86-64 non-free
```

4. :

a. Astra Linux Special Edition .10015-01 (1.7) (. Astra Linux Special Edition x.7: ,).

b. Astra Linux Common Edition , , /etc/apt/preferences.d/orel (. Astra Linux).

5. :

```
sudo apt update
```

6. nvidia-detect . (525 1.7.4.ext1):

```
sudo apt install nvidia-detect-525
```

:

```
sudo apt install nvidia-detect-510
sudo apt install nvidia-detect-495
sudo apt install nvidia-detect-470
sudo apt install nvidia-detect-460
sudo apt install nvidia-detect-390
sudo apt install nvidia-detect-340
```

7. :

```
nvidia-detect
```

8. :
- a. DKMS:
- i. 390 :

```
sudo apt install nvidia-driver-no-dkms-<_>
```

- ii. 340

```
sudo apt install nvidia-no-dkms-340
```

- b. DKMS:
- i. 390 :

```
sudo apt install nvidia-driver-<_>
```

- ii. 340:

```
sudo apt install nvidia-340
```

9. :

```
sudo reboot
```

Nvidia



Nvidia BIOS .

Nvidia Nouveau :

1. /etc/X11/xorg.conf;

```
sudo rm /etc/X11/xorg.conf
sudo dpkg-reconfigure xserver-xorg
```

2. Nvidia:

```
sudo apt remove --purge --yes --force-yes nvidia*
sudo apt remove --purge --yes --force-yes libnvidia*
sudo apt remove --purge --yes --force-yes xserver-xorg-video-n*
for nvdeb in `dpkg -l | grep nvidia`; do
    sudo apt remove --purge --yes --force-yes $nvdeb
done
```

3. GL mesa :

```
sudo apt install --reinstall --yes --force-yes xserver-xorg-core libgl1
libgl1-mesa-dri libgl1-mesa-glx libglapi-mesa libgles2 libgles2-mesa
libglew2.? libglewmx1.13 libglu1-mesa libglvnd0 libglx-mesa0 libglx0
```

4. Nvidia:

```
for nvdriver in `find /lib/modules -type f -name "nvidia*"`; do
    echo "$nvdriver"
    sudo mv -f $nvdriver ${nvdriver}--$-backup
done
sudo depmod -a
```

5. () /etc/modprobe.d/blacklist.conf, Nouveau:

```
i # blacklist nouveau
# options nouveau modeset=0
```

6. /etc/initramfs-tools/modules

```
i nouveau modeset=1
```

```
sudo update-initramfs -u -k all
```

7. .

```
i Nvidia Nvidia astra-nvidia, .
```

nvidia-settings Nvidia

- Astra Linux Special Edition .10015-01 1.7, Astra Linux Special Edition .10015-01 1.6 Astra Linux Common Edition nvidia-settings 470.57.01 : [nvidia-settings-signed-220720.tar.gz](#) web- . . [Astra Linux](#) ;
- Astra Linux Special Edition .10015-01 (1.7) nvidia-settings Nvidia ;
- Astra Linux Common Edition nvidia-settings .

CAD Wine ("libGL error: failed to load driver: swrast")

Nvidia CAD Wine (. [wine Astra Linux](#)) "libGL error: failed to load driver: swrast". Nvidia /usr/lib/i386-linux-gnu/libGL.so.1:

```
sudo rm /usr/lib/i386-linux-gnu/libGL.so.1
```

OpenGL , Nvidia

```
i Astra Linux Special Edition .10015-01 ( 1.4/1.5). Astra Linux Special Edition .10015-01 ( 1.6) OpenGL , .
```

/etc/X11/fly-dm/Xsetup :

Xsetup

```
#!/bin/sh
# Xsetup - run as root before the login dialog appears

#xconsole -geometry 480x130-0-0 -notify -verbose -fn fixed -exitOnFail -file /dev/xconsole &

if [ -x /usr/sbin/pdp-flbl ]; then
    find /dev/dri -type c -exec /usr/sbin/pdp-flbl :::ehole {} \;
    find /dev -name nvidia* -type c -exec /usr/sbin/pdp-flbl :::ehole {} \;
    /usr/sbin/pdp-flbl -R :::ehole /proc/driver/nvidia \;
fi

/usr/bin/fly-dm-set-dpi.sh
```

Nvidia

, BIOS: , .

:

1. Nvidia.
2. Nvidia. :

```
lspci | grep -E "VGA|3D"
```

```
01:00.0 3D controller [0302]: NVIDIA Corporation Device [10de:139b]
(rev a2)
```

PCI , "01:00.0". lspci , -. , ... "01:00.0" :

```
BusID "PCI:1:0:0"
```

3. , Nvidia () /etc/X11/xorg.conf :

/etc/X11/xorg.conf

```
Section "Module"
    Load "modesetting"
EndSection

Section "Device"
    Identifier "nvidia"
    Driver "nvidia"
    BusID "PCI:X:Y:Z"
    Option "AllowEmptyInitialConfiguration"
EndSection
```

BusID "PCI:X:Y:Z" - PCI Nvidia.

4. /usr/local/bin/nvidia_switch.sh :

/usr/local/bin/nvidia_switch.sh

```
xrandr --setprovideroutputsource modesetting NVIDIA-0
xrandr --auto
xrandr --dpi 96
```

:

```
chmod +x /usr/local/bin/nvidia_switch.sh
```

5. /etc/X11/fly-dm/Xsetup :

```
#!/bin/sh
# Xsetup - run as root before the login dialog appears
#xconsole -geometry 480x130-0-0 -notify -verbose -fn fixed -exitOnFail -file /dev/xconsole &
/usr/local/bin/nvidia_switch.sh
if [ -x /usr/sbin/pdp-flbl ]; then find /dev/dri -type c -exec /usr/sbin/pdp-flbl :::ehole {} \;; fi
/usr/bin/fly-dm-set-dpi.sh
```

6. .

PRIME Render Offload

NVIDIA 435.17 PRIME Render Offload - Nvidia. xf86-video-modesetting, xf86-video-amdgpu (450.57), xf86-video-intel (455.38) iGPU .
NVIDIA :

```
__NV_PRIME_RENDER_OFFLOAD=1 __GLX_VENDOR_LIBRARY_NAME="nvidia"
__VK_LAYER_NV_optimus="NVIDIA_only" <_>
```